

AIR QUALITY PERMIT

Issued To: Bear Paw Energy, LLC
1400 16th Street, Suite 310
Denver, CO 80202

Permit: #3262-00
Application Complete: 04/11/03
Preliminary Determination Issued: 05/15/03
Department's Decision Issued: 06/03/03
Permit Final: 06/19/03
AFS: #083-0017

An air quality permit, with conditions, is hereby granted to Bear Paw Energy, LLC (Bear Paw), pursuant to Sections 75-2-204 and 211 of the Montana Code annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.740, *et seq.*, as amended, for the following:

SECTION I: Permitted Facilities

A. Permitted Equipment

Permit #3262-00 is issued to Bear Paw for the construction and operation of the Cattaneo Compressor Station. The facility is a natural gas compressor station. A complete list of the permitted equipment is contained in Section I.A of the permit analysis.

B. Plant Location

The facility is located in the Southeast $\frac{1}{4}$ of the Southeast $\frac{1}{4}$ of Section 13, Township 25 North, Range 56 East, in Richland County, Montana.

SECTION II. Conditions and Limitations

A. Emission Limitations

1. Bear Paw is permitted to operate a 1,250-horsepower (Hp) natural gas fired compressor engine or a series of natural gas fired compressor engines with a maximum rated design capacity equal to or less than 1,250-Hp. Each engine shall be a rich burn engine and emissions from each engine shall be controlled by a non-selective catalytic reduction (NSCR) unit and an air to fuel ratio (AFR) controller (ARM 17.8.749 and ARM 17.8.752).
2. The combined emissions from all engine(s) comprising the 1250-Hp shall not exceed the following limits (ARM 17.8.752):

NO _x ¹	5.51 lb/hr
CO	8.27 lb/hr
VOC	2.76 lb/hr
3. The hours of operation of the emergency flare shall not exceed 500 hours during any rolling 12-month time period (ARM 17.8.1204).

¹ NO_x reported as NO₂.

4. Bear Paw shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any sources installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6-consecutive minutes (ARM 17.8.304).
5. Bear Paw shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).
6. Bear Paw shall treat all unpaved portions of the haul roads, access roads, parking lots, or general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the reasonable precautions limitation in Section II.A.5 (ARM 17.8.749).

B. Testing Requirements

1. The 1,250-Hp natural gas compressor engine(s) shall be initially tested for NO_x and CO, concurrently, to demonstrate compliance with the emission limits contained in Section II.A.2. The initial source testing shall be conducted within 180 days of the initial start up date of the compressor engine(s). After the initial source test, additional testing shall continue on an every-4-year basis or according to another testing/monitoring schedule as may be approved by the Department of Environmental Quality (Department) (ARM 17.8.105 and ARM 17.8.749).
2. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
3. The Department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. Bear Paw shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but is not limited to, all sources of emissions identified in the emission inventory contained in the permit analysis.

Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be in the units required by the Department. This information may be used to calculate operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

2. Bear Paw shall notify the Department of any construction or improvement project conducted pursuant to ARM 17.8.745(1), that would include a change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location or fuel specifications, or would result in an increase in source capacity above its permitted operation or the addition of a new emission unit.

The notice must be submitted to the Department, in writing, 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1)(d) (ARM 17.8.745).

3. All records compiled in accordance with this permit must be maintained by Bear Paw as a permanent business record for at least 5 years following the date of the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).
4. Bear Paw shall document, by month, the hours of operation of the emergency flare. By the 25th day of each month, Bear Paw shall total the hours of operation of the emergency flare during the previous 12 months to verify compliance with the limitation in Section II.A.3. A written report of the compliance verification shall be submitted along with annual emission inventory (ARM 17.8.749).
5. Bear Paw shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit as required by ARM 17.8.1204(3)(b). The annual certification shall comply with the certification requirements of ARM 17.8.1207. The annual certification shall be submitted along with the annual emission inventory information.

D. Notification

1. Bear Paw shall provide the Department with written notification of commencement of construction of the Cattaneo Compressor Station within 30 days after commencement of construction.
2. Upon purchase, and 15 days prior to installation, Bear Paw shall provide the Department with written notification of the number and maximum rated design capacities of the engine(s) installed at the facility.
3. Bear Paw shall provide the Department with written notification of the actual start-up date(s) of the compressor engine(s) within 15 days after the actual start-up date(s).

SECTION III: General Conditions

- A. Inspection – Bear Paw shall allow the Department’s representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment (CEMS, CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.
- B. Waiver – The permit and the terms, conditions, and matters stated herein shall be deemed accepted if Bear Paw fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Bear Paw of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.* (ARM 17.8.756).
- D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties or other enforcement action as specified in Section 75-2-401, *et seq.*, MCA.

- E. Appeals – Any person or persons jointly or severally adversely affected by the Department’s decision may request, within 15 days after the Department renders it’s decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The Department’s decision on the application is not final unless 15 days have elapsed and there is no request for a hearing under this section. The filing of a request for a hearing postpones the effective date of the Department’s decision until conclusion of the hearing and issuance of a final decision by the Board.
- F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy the air quality permit shall be made available for inspection by the Department at the location of the source.
- G. Permit Fee – Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay the annual operation fee by Bear Paw may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.
- H. Construction Commencement – Construction must begin within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked (ARM 17.8.762).

Permit Analysis
Bear Paw Energy, LLC
Cattaneo Compressor Station
Permit #3262-00

I. Introduction/Process Description

Bear Paw Energy, LLC (Bear Paw), is permitted for the construction and operation of the Cattaneo Compressor Station. The facility is a natural gas compressor station located in the Southeast ¼ of the Southeast ¼ of Section 13, Township 25 North, Range 56 East, in Richland County, Montana.

A. Permitted Equipment

Initially, the only emitting unit at the facility will be an emergency flare. A natural gas compressor driven by an electric motor will initially be used to compress the gas for transmission through the pipeline. However, Bear Paw requested that the permit be written to include the installation and operation of a 1,250-horsepower (Hp) natural gas fired compressor engine or a series of natural gas fired compressor engines with a maximum rated design capacity equal to or less than 1,250-Hp. The facility consists of the following permitted equipment:

- A 1,250-Hp compressor engine or a series of engines equal to or less than 1,250-Hp
- A 6-million standard cubic foot (MMScf) per day Emergency Flare

B. Source Description

The Bear Paw Cattaneo Compressor Station is a natural gas compressor station. Natural gas from area wells enters the facility through low pressure pipelines. The compressor engines boost pipeline pressure for transmitting the natural gas through the pipeline to nearby natural gas processing plants. The emergency flare is used for flaring the gas during facility upsets to maintain a consistent back pressure at the well-head. If a consistent back pressure is not maintained at the well head, the natural gas well may be damaged and the productivity of the natural gas well may be reduced.

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Department of Environmental Quality (Department). Upon request, the Department will provide references for location of complete copies of all applicable rules and regulations or copies where appropriate.

A. ARM 17.8, Subchapter 1 – General Provisions, including but not limited to:

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.

3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq.*, Montana Code Annotated (MCA).

Bear Paw shall comply with the requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited to, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the Department upon request.

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than 4 hours.
5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction of the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.

B. ARM 17.8, Subchapter 2 – Ambient Air Quality, including, but not limited to the following:

1. ARM 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for Lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM₁₀

Bear Paw must maintain compliance with the applicable ambient air quality standards.

C. ARM 17.8, Subchapter 3 – Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.
2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter. (2) Under this rule, Bear Paw shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.
3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause, allow or permit to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this rule.

4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause, allow or permit to be discharged into the atmosphere particulate matter in excess of the amount set forth in this rule.
5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. (4) Commencing July 1, 1972, no person shall burn liquid or solid fuels containing sulfur in excess of 1 pound of sulfur per million Btu fired. (5) Commencing July 1, 1971, no person shall burn any gaseous fuel containing sulfur compounds in excess of 50 grains per 100 cubic feet of gaseous fuel, calculated as hydrogen sulfide at standard conditions. Bear Paw will burn natural gas in its compressor engine(s), which will meet this limitation.
6. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank is equipped with a vapor loss control device as described in (1) of this rule.
7. ARM 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 CFR 60, Standards of Performance for New Stationary Sources (NSPS). This facility is not an NSPS affected source because it does not meet the definition of any NSPS subpart defined in 40 CFR 60.

Bear Paw's Cattaneo Compressor Station is not an NSPS affected source because it does not meet the definition of a natural gas processing plant defined in 40 CFR 60, Subpart KKK.

8. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. The owner or operator of any affected source, as defined and applied in 40 CFR Part 63, shall comply with the requirements of 40 CFR Part 63.

40 CFR 63, Subpart HH National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities. Owners or operators of oil and natural gas production facilities, as defined and applied in 40 CFR Part 63, shall comply with the standards and provisions of 40 CFR Part 63, Subpart HH. In determining whether Bear Paw's facility was a 40 CFR Part 63, Subpart HH affected source, the Department compared the facility to larger facilities permitted in Montana. The Department made determinations that several of the larger facilities in Montana do not meet the definition of a major source of hazardous air pollutants (HAP) as defined in 40 CFR Part 63, Subpart HH. Based upon the previous determinations and the size of Bear Paw's facility, 40 CFR Part 63, Subpart HH does not apply to the Cattaneo Compressor Station because the station is not a major source of HAPs.

40 CFR 63, Subpart HHH National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities. Owners or operators of natural gas transmission or storage facilities, as defined and applied in 40 CFR Part 63, shall comply with the standards and provisions of 40 CFR Part 63, Subpart HHH. In determining whether Bear Paw's facility was a 40 CFR Part 63, Subpart HHH affected source, the Department compared the facility to larger facilities permitted in Montana. The Department made determinations that several of the larger facilities in Montana do not meet the definition of a major source of HAPs as defined in 40 CFR Part 63, Subpart HHH. Based upon the previous determinations and the size of Bear Paw's facility, 40 CFR Part 63, Subpart HHH does not apply to the Cattaneo Compressor Station because the station is not a major source of HAPs.

D. ARM 17.8, Subchapter 4 – Stack Height and Dispersion Techniques, including, but not limited to:

1. ARM 17.8.401 Definitions. This rule includes a list of definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.402 Requirements. Bear Paw must demonstrate compliance with the ambient air quality standards with a stack height that does not exceed Good Engineering Practices (GEP). The proposed height of the new or altered stack(s) for the Cattaneo Compressor Station are below the allowable 65-meter GEP stack height.

E. ARM 17.8, Subchapter 5 – Air Quality Permit Application, Operation and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. Bear Paw submitted the appropriate permit application fee for the current permit action.
2. ARM 17.8.505 When Permit Required--Exclusions. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit (excluding an open burning permit) issued by the Department. The air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that prorate the required fee amount.

F. ARM 17.8, Subchapter 7 – Permit, Construction and Operation of Air Contaminant Sources, including, but not limited to:

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a facility to obtain an air quality permit or permit alteration if they construct, alter or use any air contaminant sources that have the potential to emit greater than 25 tons per year of any pollutant. Bear Paw has the potential to emit more than 25 tons per year of NO_x, CO and SO_x; therefore, an air quality permit is required.
3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.
4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that are not subject to the Montana Air Quality Permit Program.

5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, alteration or use of a source. Bear Paw submitted the required permit application for the current permit action. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. Bear Paw submitted an affidavit of publication of public notice for the April 6, 2003, issue of the *Sidney Herald - Leader*, a newspaper of general circulation in the Town of Sidney in Richland County, as proof of compliance with the public notice requirements.
6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.
7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that Best Available Control Technology (BACT) shall be utilized. The required BACT analysis is included in Section III of this permit analysis.
8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.
9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving Bear Paw of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.*
10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.
11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or altered source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.
12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).
13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not

requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, subchapters 8, 9, and 10.

14. ARM 17.8.765 Transfer of Permit. This rule states that an air quality permit may be transferred from one person to another if written notice of Intent to Transfer, including the names of the transferor and the transferee, is sent to the Department.

G. ARM 17.8, Subchapter 8 – Prevention of Significant Deterioration of Air Quality, including, but not limited to:

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.
2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification, with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source since this facility is not a listed source and the facility's potential to emit is below 250 tons per year of any pollutant (excluding fugitive emissions).

H. ARM 17.8, Subchapter 12 – Operating Permit Program Applicability, including, but not limited to:

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any source having:
 - a. Potential to Emit (PTE) > 100 tons/year of any pollutant;
 - b. PTE > 10 tons/year of any one HAP, PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or
 - c. PTE > 70 tons/year of PM₁₀ in a serious PM₁₀ nonattainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program. (1) Title V of the FCAA amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing Air Quality Permit #3262-00 for Bear Paw, the following conclusions were made.
 - a. The facility's PTE is less than 100 tons/year for any pollutant.
 - b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year for all HAPs.
 - c. This source is not located in a serious PM₁₀ nonattainment area.
 - d. This facility is not subject to any current NSPS.

- e. This facility is not subject to any current NESHAP standards.
- f. This source is not a Title IV affected source, nor a solid waste combustion unit.
- g. This source is not an EPA designated Title V source.

Bear Paw's Cattaneo Compressor Station does not require a Title V Operating Permit because federally enforceable limitations have been established in the Montana Air Quality Permit that limit the source's potential to emit below the major source threshold.

- h. ARM 17.8.1204(3). The Department may exempt a source from the requirement to obtain an air quality operating permit by establishing federally enforceable limitations that limit that source's potential to emit.
 - i. In applying for an exemption under this rule, the owner or operator of the source shall certify to the Department that the source's potential to emit does not require the source to obtain an air quality operating permit.
 - ii. Any source that obtains a federally enforceable limit on potential to emit shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit.

The Department determined that the annual reporting requirements contained in the permit are sufficient to satisfy this requirement.

- 3. ARM 17.8.1207 Certification of Truth, Accuracy, and Completeness. The compliance certification submittal required by ARM 17.8.1204(3) shall contain certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under this subchapter shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

III. BACT Determination

A BACT determination is required for each new or altered source. Bear Paw shall install on the new or altered source the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. A BACT determination is required for each new or altered source. The BACT analysis addresses the available methods for controlling NO_x and CO emissions from the compressor engine(s) and VOC emissions from the emergency flare. The Department reviewed previous BACT determinations for compressor engines and flares before making the following BACT determination.

A. Natural Gas Compressor Engine(s)

- 1. No Additional Controls.

This practice would consist of operating the natural gas compressor engine(s) without any add-on pollution control equipment.

2. Air Fuel Ratio (AFR) Controller (NO_x Control at the Crossover Point)

In this process, the proper AFR is obtained by adjusting the engine to operate at the crossover point, where NO_x and CO emissions are equal. At the crossover point, the engine operates neither too lean nor too rich. Excess hydrocarbon in a rich fuel mixture causes incomplete combustion; thus, lowering the exhaust temperature to a point where the concentration of NO_x decreases, but the concentration of CO increases. Combustion of a lean fuel mixture occurs at higher temperatures, accompanied by higher concentration of NO_x , but a lower concentration of CO.

An engine can operate manually at the crossover point; however, the engine must be tuned frequently to account for operational changes such as varying engine load, operating temperature, fuel gas quality, etc.

3. Non-Selective Catalytic Reduction (NSCR) Unit

An NSCR unit controls NO_x emissions by using the CO and the residual hydrocarbons in the exhaust of a rich-burn engine as a reducing agent for NO_x . Without the catalyst, in the presence of oxygen, the hydrocarbons will be oxidized instead of reacting with NO_x . As the excess hydrocarbon and NO_x pass over a honeycomb or monolithic catalyst (usually a combination of noble metals such as platinum, palladium, and/or rhodium), the reactants are reduced to N_2 , H_2O , and CO_2 . The noble metal catalyst usually operates between 800 degrees Fahrenheit ($^{\circ}\text{F}$) and 1,200 $^{\circ}\text{F}$; therefore, the unit would normally be mounted near the engine exhaust to maintain a high enough temperature to allow the various reactions to occur. In order to achieve maximum performance, 80% to 90% reduction of NO_x concentration, the engine needs to burn a rich fuel mixture, causing the engine to operate less efficiently.

4. NSCR unit with an AFR Controller

In order to provide for the most effective use of the catalyst in an NSCR unit (described in Section III.A.3), it is necessary to install an electronic AFR controller (described in Section III.A.2). This device maintains the proper air/fuel ratio that will optimize the degree of reducing agents in order to provide maximum emission reduction while minimizing agents that can poison the catalyst.

5. Lean-Burn Engine

The lean-burn engine uses a precombustion chamber to enclose a rich mixture of air and fuel, the mixture is then ignited in this chamber. The resulting ignition front then fires into the larger main cylinder that contains a much leaner fuel mixture. Staging the combustion and burning a leaner fuel mixture results in lowering of peak flame temperatures. Lower combustion temperature assures lower NO_x concentration in the exhaust gas stream; however, excess air in the fuel/air mixture can result in increased CO emissions.

6. Lean-Burn Engine with an AFR controller

The NO_x and CO emissions from a lean-burn engine can be stabilized by installing an electronic AFR controller. This device maintains the proper air/fuel ratio that will optimize the performance of the lean burn engine. A lean-burn engine with an AFR controller achieves approximately the same reduction in emissions as a rich-burn engine fitted with an NSCR unit and an AFR controller.

7. Summary

While no additional controls would have no energy or economic impacts on Bear Paw, no additional controls would have negative impacts on air quality. Therefore, the Department determined that no additional controls will not constitute BACT for the natural gas compressor engine(s).

Use of an AFR controller to adjust the engine to operate at the crossover point results in both NO_x and CO emissions at reasonable levels for lower power engines. However, an AFR controller does not provide as high of a reduction in NO_x and CO emissions as an NSCR unit; therefore, the Department determined that an AFR controller, alone, will not constitute BACT for the natural gas compressor engines.

In addition, an NSCR unit can be used to effectively reduce NO_x and CO emissions. However, the engine needs to burn a rich fuel mixture to achieve maximum performance, causing the engine to operate less efficiently and an NSCR unit does not provide as high of a reduction in NO_x and CO emissions as an NSCR unit with an AFR controller. Therefore, the Department determined that an NSCR unit, alone, will not constitute BACT for the natural gas compressor engines.

Further, a lean-burn engine can be utilized to effectively reduce NO_x and CO emissions. A lean-burn engine has a higher initial cost than a rich-burn engine fitted with an NSCR unit and an AFR controller; however, since there is no add-on equipment, the lean-burn engine requires far less maintenance than a rich-burn engine fitted with an NSCR unit and an AFR controller. However, because Bear Paw proposed to install a rich burn engine and because a lean-burn engine with an AFR controller achieves approximately the same reduction in emissions as a rich-burn engine fitted with an NSCR unit and an AFR controller, the Department determined that a lean burn engine will not constitute BACT in this case.

The Department determined that an NSCR unit with an AFR controller constitutes BACT for NO_x and CO emissions resulting from the operation of the proposed natural gas compressor engines. NSCR/AFR control equipment typically constitutes BACT for rich-burn compressor engines. An NSCR unit with an electronic AFR controller effectively reduces NO_x and CO emissions and is an economically and environmentally feasible option.

The control options selected have controls and control costs comparable to other recently permitted similar sources and are capable of achieving the appropriate emission standards.

B. Emergency Flare

Bear Paw proposes to install and operate an emergency flare at the Cattaneo Compressor Station. The emergency flare would be used to maintain a consistent back pressure at the natural gas well head during facility upsets (emergencies) that result in compressor shut down. Maintaining consistent back pressure during compressor shut down is necessary to prevent damage to, and reduced production of the natural gas well head.

Bear Paw requested a 500-hour operating limit per any rolling 12-month time period for the emergency flare to limit the facility's potential SO₂ emissions below the Title V operating Permit threshold of 100 tons per year. The 500-hour operating limit per any rolling 12-month time period is a very conservative limitation as actual hours of operation are expected to be well below the limitation. In addition, as described in Section VI of this permit analysis, the Department reviewed a

SCREEN3 model run submitted by Bear Paw as part of the permit application and the model demonstrated that SO₂ emissions from the flare would be well below the ambient air quality standards for SO₂.

BACT for the emergency flare is unique because the flare is the process equipment as well as the control equipment. When natural gas is routed to the flare to maintain consistent back pressure, the facility is losing production. Therefore, Bear Paw would have no desire to route natural gas to the flare, other than in emergency situations. Because the emergency flare will be operated in emergency situations and because natural gas, which is an extremely clean burning fuel, would be the material routed to the flare, the Department determined that no additional controls will constitute BACT in this case.

No additional controls has control and control costs similar to other recently permitted similar sources and is capable of achieving appropriate emission standards.

IV. Emission Inventory

Ton/year					
Source	PM ₁₀	NO _x	VOC	CO	SO _x
1,250-Hp Compressor Engine(s)	0.53	24.14	12.09	36.22	0.03
Emergency Flare (Pilot)	0.00	0.02	0.00	0.01	0.00
Emergency Flare	N/A	5.10	10.50	27.75	42.55
Total	0.53	29.26	22.59	63.98	42.58

Up to 1,250-Hp Compressor Engine(s)

Brake Horsepower: 1250 bhp
Hours of operation: 8760 hr/yr
Heat Content: 1200 Btu/Scf

PM₁₀ Emissions

Emission Factor: 9.50E-03 lb/MMBtu (AP-42, Chapter 3, Table 3.2-3, 7/00)
Fuel Consumption: 0.25 MMScf/day (Estimate)
Calculations: 0.25 MMScf/day * 9.50E-03 lb/MMBtu * 1200 MMBtu/MMScf * 1 day/24 hr = 0.12 lb/hr
0.12 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.53 ton/yr

NO_x Emissions

Emission factor: 2.0 gram/bhp-hour (BACT Determination)
Calculations: 2.0 gram/bhp-hour * 1250 bhp * 0.002205 lbs/gram = 5.51 lb/hr
5.51 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 24.14 ton/yr

VOC Emissions

Emission factor: 1.0 gram/bhp-hour (BACT Determination)
Calculations: 1.0 gram/bhp-hour * 1250 bhp * 0.002205 lb/gram = 2.76 lb/hr
2.76 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 12.09 ton/yr

CO Emissions

Emission factor: 3.0 gram/bhp-hour (BACT Determination)
Calculations: 3.0 gram/bhp-hour * 1250 bhp * 0.002205 lb/gram = 8.27 lb/hr
8.27 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 36.22 ton/yr

SO_x Emissions

Emission factor: 5.88E-04 lb/MMBtu (AP-42, Chapter 3, Table 3.2-3, 7/00)
Fuel Consumption: 0.25 MMScf/day (Estimate)
Calculations: 0.25 MMScf/day * 5.88E-04 lb/MMBtu * 1200 MMBtu/MMScf * 1 day/24 hr = 0.007 lb/hr
0.007 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.03 ton/yr

Emergency Flare (Pilot)

PM₁₀ Emissions

Emission Factor: 7.6 lb/MMScf (AP-42, Chapter 1, Table 1.4-2, 7/98)
Fuel Consumption: 0.000044 MMScf/hr
Calculations: $7.6 \text{ lb/MMScf} * 0.000044 \text{ MMScf/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.001 \text{ ton/yr}$

NO_x Emissions

Emission Factor: 94 lb/MMScf (AP-42, Chapter 1, Table 1.4-1, 7/98)
Fuel Consumption: 0.000044 MMScf/hr
Calculations: $94 \text{ lb/MMScf} * 0.000044 \text{ MMScf/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.02 \text{ ton/yr}$

VOC Emissions

Emission Factor: 5.5 lb/MMScf (AP-42, Chapter 1, Table 1.4-2, 7/98)
Fuel Consumption: 0.000044 MMScf/hr
Calculations: $5.5 \text{ lb/MMScf} * 0.000044 \text{ MMScf/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.001 \text{ ton/yr}$

CO Emissions

Emission Factor: 40 lb/MMScf (AP-42, Chapter 1, Table 1.4-1, 7/98)
Fuel Consumption: 0.000044 MMScf/hr
Calculations: $40 \text{ lb/MMScf} * 0.000044 \text{ MMScf/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.01 \text{ ton/yr}$

SO_x Emissions

Emission Factor: 0.6 lb/MMScf (AP-42, Chapter 1, Table 1.4-2, 7/98)
Fuel Consumption: 0.000044 MMScf/hr
Calculations: $0.6 \text{ lb/MMScf} * 0.000044 \text{ MMScf/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.0001 \text{ ton/yr}$

Emergency Flare

NO_x Emissions

Emission Factor: 0.068 lb/MMBtu (AP-42, Chapter 13, Table 13.5-1, 9/91)
Fuel Consumption: 6.0 MMScf/day
Heat Content: 1200 Btu/Scf
Calculations: $0.068 \text{ lb/MMBtu} * 1200 \text{ Btu/Scf} * 6.0 \text{ MMScf/day} * 1 \text{ day/24 hr} = 20.40 \text{ lb/hr}$
 $20.40 \text{ lb/hr} * 500 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 5.10 \text{ ton/yr}$

VOC Emissions

Emission Factor: 0.14 lb/MMBtu (AP-42, Chapter 13, Table 13.5-1, 9/91)
Fuel Consumption: 6.0 MMScf/day
Heat Content: 1200 Btu/Scf
Calculations: $0.14 \text{ lb/MMBtu} * 1200 \text{ Btu/Scf} * 6.0 \text{ MMScf/day} * 1 \text{ day/24 hr} = 42.00 \text{ lb/hr}$
 $42.00 \text{ lb/hr} * 500 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 10.50 \text{ ton/yr}$

CO Emissions

Emission Factor: 0.37 lb/MMBtu (AP-42, Chapter 13, Table 13.5-1, 9/91)
Fuel Consumption: 6.0 MMScf/day
Heat Content: 1200 Btu/Scf
Calculations: $0.37 \text{ lb/MMBtu} * 1200 \text{ Btu/Scf} * 6.0 \text{ MMScf/day} * 1 \text{ day/24 hr} = 111.00 \text{ lb/hr}$
 $111.00 \text{ lb/hr} * 500 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 27.75 \text{ ton/yr}$

SO_x Emissions

Fuel Consumption: 6.0 MMScf/day
Fuel Type: 0.4 parts H₂S/100 parts gas

H₂S molar volume at standard pressure and 60°F: 379 Scf H₂S

Calculations: $6,000,000 \text{ Scf fuel gas/day} * 1 \text{ day/24 hr} * 0.4 \text{ parts H}_2\text{S/100 parts gas} * 1 \text{ mol H}_2\text{S/379 Scf H}_2\text{S} * 1 \text{ mol SO}_2/\text{mol H}_2\text{S} * 64.5 \text{ lb SO}_2/\text{mol SO}_2 = 170.18 \text{ lb SO}_2/\text{hr}$
 $170.18 \text{ lb SO}_2/\text{hr} * 500 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 42.55 \text{ ton SO}_2/\text{yr}$

V. Existing Air Quality

The Bear Paw Cattaneo Compressor Station is located in the Southeast ¼ of the Southeast ¼ of Section 13, Township 25 North, Range 56 East, in Richland County, Montana. Richland County is unclassifiable/attainment for the National Ambient Air Quality Standards (NAAQS) for all criteria pollutants.

VI. Ambient Air Impact Analysis

The Department reviewed a SCREEN3 (an EPA-approved screening model) model run submitted by Bear Paw as part of the permit application. The model used an emission rate of 21.42 grams per second, which is the potential SO₂ emissions (744.6 tons per year) from the emergency flare converted to grams per second before applying the 500 hour per year operational limit that Bear Paw requested for the emergency flare. The maximum 1-hour concentration was then converted to parts per million (ppm) and compared to the ambient air quality standards to determine if the SO₂ emissions from the flare would cause the facility to violate ambient air quality standards for SO₂.

SCREEN3 Model Run - SO₂

Simple Terrain Inputs:

Source Type	=	Flare
Emission Rate (G/S)	=	21.42
Flare Stack Height (M)	=	7.62 (approximately)
Total Heat Release Rate (Cal/s)	=	0.209996E08
Receptor Height (M)	=	1.00
Urban/Rural Option	=	Rural
Building Height (M)	=	0.0000
Minimum Horizontal Building Dimension (M)	=	0.0000
Maximum Horizontal Building Dimension (M)	=	0.0000

The model calculated a maximum 1-hour concentration of 21.90 micrograms per cubic meter or 0.0034 ppm. The SCREEN3 model demonstrated that the SO₂ emissions from the emergency flare will not cause or contribute to a violation of the ambient air quality standards. The potential SO₂ emissions from the flare are 744.60 tons per year; however, Bear Paw requested an operational limit of 500 hours per year because the flare is only used for facility upsets (emergencies) to prevent damage to the natural gas well-head. Considering the 500 hour per year operational limitation for the emergency flare, potential SO₂ emissions are reduced to 42.55 tons per year and the total SO₂ emissions from the facility are 42.58 ton/year. Because the model used SO₂ emissions prior to applying the 500 hour per year operational limitation to the flare and because the model results were well below the ambient air quality standards for SO₂, the remaining point sources for SO₂ (0.03 ton/yr) were not modeled.

VII. Taking or Damaging Implication Analysis

As required by 2-10-105, MCA, the Department conducted a private property taking and damaging assessment and determined there are no taking or damaging implications.

VIII. Environmental Assessment

An environmental assessment, required by the Montana Environmental Policy Act, was completed for this project. A copy is attached.

DEPARTMENT OF ENVIRONMENTAL QUALITY
Permitting and Compliance Division
Air and Waste management Bureau
P.O. Box 200901, Helena, Montana 59620
(406) 444-3490

FINAL ENVIRONMENTAL ASSESSMENT (EA)

Issued To: Bear Paw Energy, LLC
Cattaneo Compressor Station
P.O. Box 1400 16th Street, Suite 310
Denver, CO 80202

Air Quality Permit number: 3262-00

Preliminary Determination Issued: 05/15/03

Department Decision Issued: 06/03/03

Permit Final: 06/19/03

1. *Legal Description of Site:* Bear Paw's Cattaneo Compressor Station would be located in Richland County, Montana. The legal description is the Southeast ¼ of the Southeast ¼ of Section 13, Township 25 North, Range 56 east, in Richland County, Montana.
2. *Description of Project:* Bear paw proposes to construct and operate a natural gas compressor station. The facility would be known as the Cattaneo Compressor station and would consist of a 1,250-Hp natural gas fired compressor engine or a series of natural gas fired compressor engines with a maximum rated design capacity equal to, or less than 1,250-Hp and an emergency flare.
3. *Objectives of Project:* The proposed project would provide additional business and revenue for Bear Paw by allowing the company to gather and sell larger quantities of natural gas.
4. *Alternatives Considered:* In addition to the proposed action, the Department also considered the "no-action" alternative. The "no-action" alternative would deny issuance of the Montana Air Quality permit to the proposed facility. However, the Department does not consider the "no-action" alternative to be appropriate because Bear Paw demonstrated compliance with all applicable rules and regulations as required for permit issuance. Therefore, the "no-action" alternative was eliminated from further consideration.
5. *A Listing of Mitigation, Stipulations, and Other Controls:* A list of enforceable conditions, including a BACT analysis, would be included in Permit #3262-00.
6. *Regulatory Effects on Private Property:* The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined that the permit conditions are reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and do not unduly restrict private property rights.

7. The following table summarizes the potential physical and biological effects of the proposed project on the human environment. The “no-action” alternative was discussed previously.

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Terrestrial and Aquatic Life and Habitats			X			Yes
B	Water Quality, Quantity, and Distribution			X			Yes
C	Geology and Soil Quality, Stability and Moisture			X			Yes
D	Vegetation Cover, Quantity, and Quality			X			Yes
E	Aesthetics			X			Yes
F	Air Quality			X			Yes
G	Unique Endangered, Fragile, or Limited Environmental Resources			X			Yes
H	Demands on Environmental Resource of Water, Air and Energy			X			Yes
I	Historical and Archaeological Sites			X			Yes
J	Cumulative and Secondary Impacts			X			Yes

SUMMARY OF COMMENTS ON POTENTIAL PHYSICAL AND BIOLOGICAL EFFECTS: The following comments have been prepared by the Department.

A. Terrestrial and Aquatic life and Habitats

Minor impacts on terrestrial or aquatic life and habitats would be expected from the proposed project because the facility would be a source of air pollutants. While the facility would emit air pollutants, and corresponding deposition of pollutants would occur, as described in Section 7.F. of this EA, the Department determined that any impacts from deposition would be minor due to dispersion characteristics of the pollutants and the atmosphere, and conditions that would be placed in Permit #3262-00. In addition, minor land disturbance would occur to construct the facility. Small buildings would be constructed, the site would be graded, and gravel would be distributed over the property to minimize erosion. Any impacts from facility construction would be minor due to the relatively small size of the project. Overall, any impacts to terrestrial and aquatic life and habitats would be minor.

B. Water Quality, Quantity and Distribution

Minor, if any, impacts would be expected on water quality, quantity and distribution from the proposed project because of the relatively small size of the project. The nearest surface water is Hardscrabble Creek, which is located approximately $\frac{3}{4}$ of a mile northeast of the facility. While the facility would emit air pollutants, and corresponding deposition of pollutants would occur, as described in Section 7.F. of this EA, the Department determined that, due to dispersion characteristics of pollutants and the atmosphere, and conditions that would be placed in Permit #3262-00, the chance of deposition of pollutants impacting water quality, quantity and distribution would be minor. In addition, facility construction would not impact water quality, quantity, or distribution because there is no surface water at or near the site. Overall, any impacts to water quality, quantity, and distribution would be minor.

C. Geology and Soil Quality, Stability and Moisture

Minor impacts would occur on the geology and soil quality, stability, and moisture from the proposed project because minor construction would be required to complete the project. Small buildings would be constructed, the site would be graded, and gravel would be distributed over the property to minimize erosion. Any impacts to the geology and soil quality, stability and moisture from facility construction would be minor due to the relatively small size of the project. In addition, while deposition of pollutants would occur, as described in Section 7.F of this EA, the Department determined that the chance of deposition of pollutants impacting the geology and soil in the areas surrounding the site would be minor due to dispersion characteristics of pollutants and the atmosphere and conditions that would be placed in Permit #3262-00. Overall, any impacts to the geology and soil quality, stability and moisture would be minor.

D. Vegetation Cover, Quantity, and Quality

Minor impacts would occur on vegetation cover, quantity, and quality because minor construction would be required to complete the project. Small buildings would be constructed, the site would be graded, and gravel would be distributed over the property to minimize erosion. Any impacts to the vegetation cover, quantity, and quality from facility construction would be minor due to the relatively small size of the project. In addition, while deposition of pollutants would occur, as described in Section 7.F of this EA, the Department determined that the chance of deposition of pollutants impacting the vegetation in the areas surrounding the site would be minor due to dispersion characteristics of pollutants and the atmosphere and conditions that would be placed in Permit #3262-00. Overall, any impacts to vegetation cover, quantity, and quality would be minor.

E. Aesthetics

Minor impacts would result on the aesthetics of the area because the facility would be a new facility. Small buildings would be constructed to house the engine(s). In addition, the facility would create additional noise in the area. However, any aesthetic impacts would be minor due to the relatively small size of the facility.

F. Air Quality

The air quality of the area would realize minor impacts from the proposed project because the facility would emit relatively small amounts of particulate matter less than 10 microns in aerodynamic diameter (PM₁₀), oxides of nitrogen (NO_x), carbon monoxide (CO), volatile organic compounds (VOC), and oxides of sulfur (SO_x) emissions. Air emissions from the facility would be minimized by conditions that would be placed in Permit #3262-00. Conditions would include, but would not be limited to, opacity limitations on the proposed engines, as well as the general facility, and an hour of operation limitation of 500 hours per any rolling 12-month time period on the emergency flare. While deposition of pollutants would occur as a result of operating the facility, the Department determined that any air quality impacts from deposition of pollutants would be minor due to dispersion characteristics of pollutants (stack height, stack temperature, etc.), the atmosphere (wind speed, wind direction, ambient temperature, etc.), and conditions that would be placed in Permit #3262-00.

In addition, the Department reviewed a SCREEN 3 model run submitted by Bear Paw as part of the permit application. The model was conducted to compare sulfur dioxide (SO₂) emissions to the ambient air quality standards for SO₂. The model used the potential emission rate of the

flare prior the 500 hour per any 12 month rolling time period limitation that would be included in Permit #3262-00. The model demonstrated that SO₂ emissions from the facility would be well below the ambient air quality standards for SO₂. Further, the flare is only used in emergency situations and the 500 hours any per 12 month rolling time period limitation would be a very conservative limitation and actual hours of operation would be expected to be well below 500 hours per any 12 month rolling time period. Overall, any impacts to the air quality of the area would be minor.

G. Unique Endangered, Fragile, or Limited Environmental Resources

In an effort to identify any unique endangered, fragile, or limited environmental resources in the area, the Department contacted the Montana Natural Heritage Program, Natural Resource Information System (NRIS). The NRIS search did not identify any species of special concern in the vicinity of the project area. In this case, the area was defined by the section, township, and range of the proposed location with an additional 1-mile buffer zone. Due to the minor amounts of construction that would be required, the relatively low levels of pollutants that would be emitted, dispersion characteristics of pollutants and the atmosphere, conditions that would be placed in Permit #3262-00, and because the NRIS search did not identify any species of special concern in the vicinity of the project area, the Department determined that the chance of the project impacting any species of special concern would be minor.

H. Demands on Environmental Resource of Water, Air and Energy

The proposed project would have minor impacts on the demands on the environmental resources of air and water because the facility would be a source of air pollutants. However, the facility's potential to emit would be relatively small by industrial standards. While deposition of pollutants would occur, as explained in Section 7.F of this EA, the Department determined that the chance of the proposed project impacting demands on air and water resources would be minor due to dispersion characteristics of pollutants and the atmosphere, and conditions that would be placed in Permit #3262-00.

The proposed project would be expected to have only minor impacts on the demand on the environmental resource of energy because of the relatively small size of the facility. The initial natural gas compressor would be driven by an electric motor. However, as the demand on natural gas production increases, Bear Paw would install natural gas fired compressor engine(s) equal to, or less than 1,250 total Hp, as Permit #3262-00 would allow. Therefore, as the demand for additional natural gas production increases, the impacts on the environmental resource of energy would decrease. Overall, the impacts on the demands on the environmental resources of water, air, and energy would be minor.

I. Historical and Archaeological Sites

In an effort to identify any historical and archaeological sites near the proposed project area, the Department contacted the Montana Historical Society, State Historic Preservation Office (SHPO). According to SHPO records, there have not been any previously recorded historic or archaeological sites within the proposed area. In addition, SHPO records indicated that no previous cultural resource inventories have been conducted in the area. However, SHPO stated that because of the small amount of ground disturbance associated with the proposed project that there would be low likelihood that cultural properties would be impacted; therefore, the Department determined that the chance of the project impacting any historical and archaeological sites in the area would be minor.

J. Cumulative and Secondary Impacts

Overall, the cumulative and secondary impacts on the physical and biological aspects of the human environment in the immediate area would be minor due to the relatively small size of the project. Potential emissions from the facility would be small by industrial standards and the emergency flare would only be operated in emergency situations (less than 500 hours per year). The Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as would be outlined in Permit #3262-00.

8. The following table summarizes the potential economic and social effects of the proposed project on the human environment. The “no-action” alternative was discussed previously.

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Social Structures and Mores				X		Yes
B	Cultural Uniqueness and Diversity				X		Yes
C	Local and State Tax Base and Tax Revenue			X			Yes
D	Agricultural or Industrial Production			X			Yes
E	Human Health			X			Yes
F	Access to and Quality of Recreational and Wilderness Activities			X			Yes
G	Quantity and Distribution of Employment				X		Yes
H	Distribution of Population				X		Yes
I	Demands for Government Services			X			Yes
J	Industrial and Commercial Activity			X			Yes
K	Locally Adopted Environmental Plans and Goals				X		Yes
L	Cumulative and Secondary Impacts			X			Yes

SUMMARY OF COMMENTS ON POTENTIAL ECENOMIC AND SOCIAL EFFECTS: The following comments have been prepared by the Department.

A. Social Structures and Mores

The proposed project would not cause a disruption to any native or traditional lifestyles or communities (social structures or mores) in the area because the proposed project would take place in a remote location. The nearest home not associated with the project would be approximately 2 miles from the facility and the facility would be relatively small by industrial standards.

B. Cultural Uniqueness and Diversity

The cultural uniqueness and diversity of the area would remain unchanged from the proposed project (no impact) because the proposed project would take place in a remote location. The nearest home not associated with the project would be approximately 2 miles from the facility and the facility would be relatively small by industrial standards.

C. Local and State Tax Base and Tax Revenue

The proposed project would result in minor, if any, impacts to the local and state tax base and tax revenue because the proposed project would not require new permanent employees to be hired (the facility would be an unmanned station). In addition, only minor amounts of construction would be needed to complete the project.

D. Agricultural or Industrial Production

The current land use of the proposed location is agriculture; therefore, the proposed project would result in minor impacts to agricultural production due to the relatively small size of the facility. The proposed project would not have any impacts to industrial production because the proposed project would not displace any industrial land. While air emissions would continue to occur, as Section 7.F of this EA explains, the Department determined that the chance of deposition of pollutants impacting agricultural or industrial production in the areas surrounding the site would be minor due to dispersion characteristics of pollutants and the atmosphere, and conditions that would be placed in Permit #3262-00. Overall, any impacts to agricultural or industrial production would be minor.

E. Human Health

The proposed project would result in only minor, if any, impacts to human health because of the relatively small potential emissions. As explained in Section 7.F of this EA, deposition of pollutants would occur. However, the Department determined that the proposed project, permitted by Permit #3262-00, would comply with all applicable air quality rules, regulations, and standards. These rules, regulations, and standards are designed to be protective of human health.

F. Access to and Quality of Recreational and Wilderness Activities

The proposed project would not have any impacts on access to recreational and wilderness activities because of the relatively small size of the facility. The proposed project would have minor, if any, impacts on the quality of recreational and wilderness activities in the area because the facility, while relatively small by industrial standards, would be visible and would produce noise.

G. Quantity and Distribution of Employment

The proposed project would not affect the quantity and distribution of employment because no permanent employees would be hired as a result of the proposed project. However, temporary construction-related positions would result from this project but any impacts to the quantity and distribution of employment would be minor due to the relatively small size of the facility.

H. Distribution of Population

The proposed project would not affect distribution of population in the area because the facility would be located in a relatively remote location. The proposed project would not create any new permanent employment that would cause an increase in population in the area. In addition, the proposed project would not have impacts that would cause a decrease in the distribution of population in the surrounding area because the facility would be relatively small by industrial standards and the facility would only emit relatively small amounts of emissions.

I. Demands for Government Services

There would be minor impacts on demands of government services because additional time would be required by government agencies to issue Permit #3262-00 and to assure compliance with applicable rules, standards, and Permit #3262-00.

J. Industrial and Commercial Activity

Only minor impacts would be expected on the local industrial and commercial activity because the proposed project would represent only a minor increase in the industrial and commercial activity in the area. The proposed project would be relatively small and would take place at a relatively remote location.

K. Locally Adopted Environmental Plans and Goals

The Department is not aware of any locally adopted environmental plans and goals that would be affected by issuing Permit #3262-00. The state standards would protect the proposed site and the environment surrounding the site.

L. Cumulative and Secondary Impacts

Overall, cumulative and secondary impacts from this project would result in minor impacts to the economic and social aspects of the human environment in the immediate area due to the relatively small size of the facility. Due to the relatively small size of the project, the industrial production, employment, and tax revenue (etc.) would not be significantly impacted by the proposed project. In addition, the Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as would be outlined in Permit #3262-00.

Recommendation: No EIS is required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: The current permitting action is for the construction and operation of a natural gas compressor station. Permit #3262-00 would include conditions and limitations to ensure the facility would operate in compliance with all applicable rules and regulations. In addition, there are no significant impacts associated with the proposed project.

Other groups or agencies contacted or which may have overlapping jurisdiction: Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

Individuals or groups contributing to this EA: Department of Environmental Quality – Air and Waste management Bureau, Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

EA prepared by: Dave Aguirre
Date: April 29, 2003